

## **APPENDIX A**

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### **THE TRIM2 MODEL AND ITS SIMULATION OF CHILD SUPPORT**

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The simulations of the child support environment in 1995 were accomplished by the Transfer Income Model (TRIM2), developed and maintained by the Urban Institute. Over the past several years, funded by the Department of Health and Human Services and the Congressional Budget Office, the Urban Institute has added to TRIM2 a child support module and a module to simulate a child support assurance program. The TRIM2 model, and its child support modules, are based on the 1990 March Current Population Survey (CPS) of the Bureau of the Census, which gathers information for income year 1989. TRIM2 uses data from the 1990 April Child Support Supplement to the CPS (CPS-CSS) to impute child support characteristics to the March CPS file.

#### **THE CHILD SUPPORT MODULE<sup>1</sup>**

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The TRIM2 universe of mothers demographically eligible for child support is identical in concept to the April CPS-CSS universe: mothers with at least one child under the age of 21 who live apart from the child's father.<sup>2</sup> The CPS-CSS, however, undercounts the number of eligible mothers because it does not identify currently married mothers who had children by another man out of wedlock or any mother (married, divorced, or separated) who had children from an earlier divorce or separation but not from the latest one.

In TRIM2, all divorced, separated, and never-married mothers with a child under age 21 in the March CPS are considered to be demographically eligible for child support. The procedure for finding currently married mothers who are demographically eligible for child support is more difficult. TRIM2 identifies several groups of eligible married mothers, using both March CPS and April CPS-CSS information, as follows: (1) mothers who live in a family in which the husband reports having stepchildren on the March CPS; (2) mothers who report child support

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1. This description draws on information in Sandra Clark, "Using Microsimulation to Model Child Support Characteristics and Child Support Assurance Programs" (Urban Institute, Washington, D.C., 1994).
  2. The CPS-CSS does not include information on custodial fathers or on people caring for children of other parents (for example, children in foster care).

income on the March CPS; and (3) other mothers identified as being demographically eligible for child support on the April CPS-CSS. Because those three sources do not provide enough currently married mothers who are demographically eligible for child support, TRIM2 randomly selects additional married mothers. Those married mothers selected randomly account for about 10 percent of all married mothers estimated by TRIM2 to be demographically eligible for child support (or about 3 percent of all eligible mothers). Through a complex set of steps, TRIM2 then determines which children in the family are demographically eligible for child support.

After identifying the demographically eligible universe of mothers, child support characteristics or outcomes are imputed to the mothers. Those imputations are based on five equations, with the following dependent variables:

- o The probability that a mother who is demographically eligible for child support is supposed to receive child support--that is, has an award;
- o The amount of child support due for those mothers who are supposed to receive child support;
- o The probability of receiving any child support for those mothers who are supposed to receive child support--that is, who have awards;
- o The probability of receiving the full amount due for those mothers who receive some child support; and
- o The amount of child support received for those mothers who receive less than the full amount due.

The equations were estimated from the April CPS-CSS data. Each included as explanatory variables: marital status, age, race, education, family income, eligibility for Aid to Families with Dependent Children, region of residence, metropolitan status, and the number of children eligible for child support. An individual mother's probability, as determined from the equations, is then compared to a random number between 0 and 1; if her probability exceeds the random number, TRIM2 identifies her as being supposed to receive child support, receive payments, or receive the full amount due. Different random numbers are used for the three determinations. The award and payment amounts are estimated using multiple regression.

TRIM2 can then simulate changes in child support outcomes by altering those predicted values. For example, CBO estimated that recent legislative changes

affecting paternity establishment would increase by 6 percentage points the probability that a never-married woman would have an award. That increase was applied directly to each never-married woman's probability before the change. Similarly, CBO estimated that the impacts of legislation relating to guidelines would raise award amounts by 15 percent; in that case, the predicted value was multiplied by 1.15. Because the equations operate sequentially, TRIM2 captures interactions among child support outcomes. For example, an increase in child support awards increases the number of mothers receiving child support and so on.

Because of the complexity of the model and the estimated changes for the 1995 update that CBO developed, the simulations of the 1995 environment were run only once. Greater reliability would have been achieved if the simulations had been run multiple times to generate a range of estimates.

#### COMPARING THE TRIM2 CHILD SUPPORT UNIVERSE AND CHARACTERISTICS WITH THE CPS-CSS

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The major difference between the TRIM2 simulation and the April CPS-CSS estimates for 1989 is in the estimated number of mothers demographically eligible for child support, as shown in Table A-1. The overall TRIM2 number is higher by 1.4 million, or 14 percent. By using the March CPS as its data source, the TRIM2 model finds mothers missed by the April CPS-CSS: 28 percent more currently married mothers, 18 percent more divorced mothers, and 23 percent more separated mothers. Never-married mothers are fewer in TRIM2 than in the CPS-CSS; the CPS-CSS mistakenly identifies some grandmothers and other relatives as mothers.

Child support outcomes simulated by TRIM2, except for married mothers, are quite close to those in the CPS-CSS (see Table A-1). Overall, the proportion supposed to receive child support is 2 percentage points lower in TRIM2, the proportion who receive child support 2 percentage points higher, and the proportion who receive the full amount due 2 percentage points lower. Without the differences for married mothers, those changes would be 1 percentage point or less. The dollar amounts of awards and of partial child support receipts are higher in TRIM2 by 1 percent or less. The average amount of child support received is 5 percent lower, probably at least in part the result of their lower probability of receiving the full amount of the award.

TABLE A-1. COMPARISON OF TRIM2 SIMULATION AND APRIL CURRENT POPULATION SURVEY-CHILD SUPPORT SUPPLEMENT ESTIMATES, 1989

Marital Status	Eligible Women <sup>a</sup> (In thousands)	Women Who Have Awards as a Percentage of Those Who Are Eligible <sup>b</sup>	Average Award Amounts <sup>c</sup> (In nominal dollars)	Women Who Receive Child Support as a Percentage of Those Who Have Awards	Women Who Receive Full Amount Due as a Percentage of Those Who Receive Some Payment	Average Child Support Received <sup>c</sup> (In nominal dollars)	Average Child Support Received If Less Than Full Amount Due <sup>c</sup> (In nominal dollars)
<b>April CPS-CSS</b>							
Divorced	3,056	70	3,358	77	66	2,914	1,530
Separated	1,352	39	2,953	80	71	2,605	1,249
Married <sup>d</sup>	2,531	67	2,964	72	71	2,715	1,499
Never Married	2,950	20	2,022	73	67	1,732	817
All	9,955	50	3,024	75	68	2,676	1,407
<b>TRIM2</b>							
Divorced	3,618	69	3,381	77	66	2,802	1,554
Separated	1,668	37	2,949	80	70	2,478	1,258
Married <sup>d</sup>	3,250	56	2,978	77	65	2,491	1,512
Never Married	2,840	21	2,022	74	66	1,648	819
All	11,377	48	3,055	77	66	2,544	1,418
<b>Difference<sup>c</sup></b>							
Divorced	562	-1	23	0	0	-112	24
Separated	316	-2	-4	0	-1	-127	9
Married <sup>d</sup>	719	-11	14	5	-6	-224	13
Never Married	-110	1	0	1	-1	-84	2
All	1,422	-2	31	2	-2	-132	11

(continued)

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**TABLE A-1.      CONTINUED**

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**SOURCE:**      Congressional Budget Office calculations based on estimates from TRIM2 microsimulation model and data from the April 1990 Current Population Survey-Child Support Supplement (CPS-CSS).

**NOTE:**      The April CPS-CSS data for dollar amounts of awards and payments are before adjustment of amounts by the Bureau of the Census. See Appendix B for more information.

- a.      Eligible women are those with children under 21 years old who are eligible for child support payments from a noncustodial father. Estimates of the number of eligible women are for 1990.
  - b.      Mothers who have awards of child support are only those eligible to receive child support payments in 1989 or 1995.
  - c.      Average amounts are per mother.
  - d.      Married women are those currently married who have a child from a previous marriage or a birth out of wedlock.
  - e.      Differences in outcomes shown as percentages are in percentage points.
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## **APPENDIX B**

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### **BASIS OF THE PROJECTIONS TO 1995**

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The starting point for the Congressional Budget Office (CBO) projections was the Transfer Income Model (TRIM2), which included estimates of child support variables for 1989, as discussed in Appendix A. With those 1989 estimates as a base, CBO projected 1995 child support variables in two steps. First, CBO projected changes from 1989 to 1995 in the number of mothers eligible for child support and child support outcomes, based on their past trends. Second, CBO estimated changes in the child support environment between 1989 and 1995 resulting from recent legislative changes, based on studies of their impacts. Those two projected sets of changes were then combined and applied to the TRIM2 model to simulate the 1995 child support environment.

### **ANALYZING THE CHANGES IN CHILD SUPPORT OUTCOMES**

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Table B-1 shows the projected changes in child support from 1989 to 1995 by the source of the change: changes in the number of eligible mothers, changes in child support outcomes from trend adjustments, and changes in child support outcomes from three groupings of legislation. Each of the panels in the table, and each legislative change within panel three, shows the incremental change in child support outcomes from the preceding panel. For example, in the third panel, the increase of 6 percentage points in the proportion of never-married mothers awarded child support is an estimate of the effect of legislation on paternity establishment alone and is in addition to the 8 percentage point increase in the second panel attributable to trend adjustments.

The number of mothers eligible to receive child support is expected to increase by 1.6 million, or 14 percent, from 1989 to 1995. As discussed earlier, most of the increase is for never-married mothers. More eligible mothers means more mothers who have awards, more who receive child support, and so on. The small changes in child support outcomes by marital status shown in the first panel of the table indicate that the simulations, accomplished with the TRIM2 model, left 1989 outcomes essentially unchanged. In other words, those newly eligible mothers were assigned child support outcomes basically identical to outcomes for eligible mothers

TABLE B-1. PROJECTED CHANGES IN CHILD SUPPORT, 1989 TO 1995, BY SOURCE OF CHANGE

Marital Status	Eligible Women <sup>a</sup> (In thousands)	Women Who Have Awards as a Percentage of Those Who Are Eligible <sup>b</sup>	Average Award Amounts <sup>c</sup> (In nominal dollars)	Women Who Receive Child Support as a Percentage of Those Who Have Awards	Women Who Receive Full Amount Due as a Percentage of Those Who Receive Some Payment	Average Child Support Received <sup>d</sup> (In nominal dollars)	Average Child Support Received If Less Than Full Amount Due <sup>c</sup> (In nominal dollars)
<b>Changes from Trend Adjustment in Number of Eligible Women</b>							
Divorced	213	f	f	f	f	f	f
Separated	-171	f	f	1	-1	f	f
Married <sup>e</sup>	374	f	f	f	f	f	f
Never Married	1,210	f	12	f	f	12	f
All	1,625	-2	-35	f	f	-29	f
<b>Changes from Other Trend Adjustments</b>							
Divorced	g	-1	803	2	1	635	233
Separated	g	4	-451	-2	8	-261	-183
Married <sup>e</sup>	g	6	-199	3	5	-79	-49
Never Married	g	8	517	7	-7	254	105
All	g	4	242	3	1	188	28

(continued)



TABLE B-1. CONTINUED

Marital Status	Eligible Women <sup>a</sup> (In thousands)	Women Who Have Awards as a Percentage of Those Who Are Eligible <sup>b</sup>	Average Award Amounts <sup>c</sup> (In nominal dollars)	Women Who Receive Child Support as a Percentage of Those Who Have Awards	Women Who Receive Full Amount Due as a Percentage of Those Who Receive Some Payment	Average Child Support Received <sup>d</sup> (In nominal dollars)	Average Child Support Received If Less Than Full Amount Due <sup>c</sup> (In nominal dollars)
<b>Changes from Legislation</b>							
<b>Paternity Establishment</b>							
Divorced	g	h	h	h	h	h	h
Separated	g	h	h	h	h	h	h
Married <sup>e</sup>	g	h	h	h	h	h	h
Never Married	g	6	-14	-1	f	-13	-9
All	g	2	-29	f	f	-31	-26
<b>Guidelines and Review and Modification</b>							
Divorced	g	g	325	f	f	251	86
Separated	g	g	200	f	f	177	48
Married <sup>e</sup>	g	g	235	f	f	177	77
Never Married	g	g	274	f	f	192	62
All	g	g	274	f	f	208	74
<b>Immediate Wage Withholding</b>							
Divorced	g	g	g	1	f	25	35
Separated	g	g	g	1	1	15	26
Married <sup>e</sup>	g	g	g	1	f	12	42
Never Married	g	g	g	1	f	8	16
All	g	g	g	1	f	15	33

(continued)

TABLE B-1. CONTINUED

Marital Status	Eligible Women <sup>a</sup> (In thousands)	Women Who Have Awards as a Percentage of Those Who Are Eligible <sup>b</sup>	Average Award Amounts <sup>c</sup> (In nominal dollars)	Women Who Receive Child Support as a Percentage of Those Who Have Awards	Women Who Receive Full Amount Due as a Percentage of Those Who Receive Some Payment	Average Child Support Received <sup>d</sup> (In nominal dollars)	Average Child Support Received If Less Than Full Amount Due <sup>e</sup> (In nominal dollars)
<b>Total Changes</b>							
Divorced	213	-1	1,127	3	1	909	354
Separated	-171	4	-251	1	8	-70	-109
Married <sup>e</sup>	374	6	36	4	5	110	70
Never Married	1,210	14	789	8	-7	453	174
All	1,625	4	452	4	1	351	109

SOURCE: Congressional Budget Office based on estimates from TRIM2 microsimulation model.

NOTES: Projections for 1995 are based on Congressional Budget Office projections and estimated legislative effects, which are then simulated in the TRIM2 model.

Changes in outcomes shown as percentages are in percentage points.

- a. Eligible women are those with children under 21 years old who are eligible for child support payments from a noncustodial father. Changes are for the years between 1990 and 1996.
- b. Mothers who have awards of child support are only those eligible to receive child support payments in 1989 or 1995.
- c. Average amounts are per mother.
- d. Average amounts are per mother. Average child support received was not projected separately; changes in those receipts resulted from changes in other child support outcomes.
- e. Married women are those currently married who have a child from a previous marriage or a birth out of wedlock.
- f. Change is less than 0.5 percentage points or \$3.
- g. The particular source of change has no effect on these outcomes.
- h. Paternity establishment only affects never-married mothers.

in 1989.<sup>1</sup> For all mothers taken together, however, average outcomes worsen because of the relative increase in the number of never-married mothers, whose outcomes are generally worse than for other mothers. For example, the proportion of all eligible mothers who have awards declines by 2 percentage points.

Projected changes in child support outcomes derived from extrapolating other trends of the 1980s, shown in the second panel of the table, are generally positive, except for award and payment dollar amounts for separated and married mothers. Never-married mothers show the largest increase in the proportion given child support awards and in the percentage increase in award amounts in nominal dollars, although not in the absolute dollar amounts. Reflecting those higher award amounts, never-married mothers have relatively large increases--of \$254 or around 15 percent--in average amounts of child support received. After adjusting for inflation, however, average child support received by never-married mothers declines by 1 percent. On average, all eligible mothers have projected increases of almost 1 percentage point to 4 percentage points in the proportions who have awards, receive child support, and receive the full amount due. Average amounts awarded and received are projected to increase by about 8 percent in nominal dollars but decline by about that much after adjusting for inflation.

The third panel shows the estimated effects of legislative changes. Legislation enacted in 1988 and in 1993 added requirements for establishing paternity. As a result, the proportion of never-married mothers who have child support awards is projected to rise by 6 percentage points. That increase, together with the nearly 8 percentage point trend increase, gives never-married mothers a sizable 14 percentage point increase in the proportion who have awards--from 21 percent in 1989 to 35 percent in 1995.

CBO estimates that legislation mandating the use of guidelines in setting awards and periodic review and modification for some families will increase average award amounts for all mothers with awards by \$274, or 8 percent. After adjusting for inflation, however, the increase actually becomes a drop of 7 percent. All mothers affected by the legislation, regardless of marital status, were assigned the same percentage increase. Mothers with new awards, however, have larger average increases. The higher award amounts prompt higher child support payments, as shown in the last two columns of the table.

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1. The newly eligible mothers could not be assigned more positive outcomes, consistent with improving trends, because the simulation simply increased the weights for all eligible mothers and thus could not distinguish the newly eligible mothers. In the projection of changes resulting from legislation, however, new mothers who have awards were assigned better child support outcomes.

Legislation requiring immediate wage withholding for some families is projected to increase the probability of child support payments and the amounts of those payments. The projected increases are small, however, indicating that few families have been affected by the legislation, as discussed below. For example, the proportion of those who actually receive child support, among those who are awarded it, is projected to increase by less than 1 percentage point. The average amount received is projected to increase by less than 1 percent.

### EXTRAPOLATING TRENDS

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In order to estimate increases in the number of mothers eligible to receive child support and changes in child support outcomes, CBO projected changes from 1989 to 1995, based on a simple extrapolation of trends in the variables during the 1980s. Measures of those trends were taken from the matched March-April child support supplements of the Current Population Survey (CPS-CSS), which were conducted every two years, beginning in 1979. For purposes of the projections, the 1982, 1984, 1986, 1988, and 1990 supplements (with child support data for 1981, 1983, 1985, 1987, and 1989) were used, providing four years of changes.<sup>2</sup> CBO's projections were based on averaging percentage changes over those years--or a subset of those years--separately for each marital status.

Those procedures were altered slightly for two of the child support outcomes. First, for award amounts, the percentage change from 1985 to 1987 was excluded from the average and the percentage change from 1987 to 1989 was based on data that had not been edited along one dimension by the Bureau of the Census. Award amounts reported by the Bureau of the Census jumped sharply from 1985 to 1987--about 15 percent when adjusted for inflation--after dropping in previous years. The cause of this jump is not entirely clear, but one possible explanation is that the data for the two years are inconsistent. In 1987 and 1989, the Bureau used an editing routine that raised the amounts of child support paid and awarded above those reported in the CPS-CSS. Child support received by families is reported on both the March and April CPS. In processing the 1988 CPS-CSS for income year 1987, the Bureau of the Census increased reported amounts of child support received on the April supplement to equal amounts reported in March if March was higher (and positive amounts were reported by mothers in both months). Award amounts were increased correspondingly. That same adjustment was made in the 1990 CPS-CSS

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2. The results from the 1992 survey are expected to be released in the spring of 1995.

for income year 1989. Staff at the bureau believe that those procedures were also used in 1985 and earlier years but cannot document them.

In an attempt to settle this uncertainty, CBO compared the March and April amounts for respondents in 1987, when the edit was definitely made, and in 1985, when it might, or might not, have been made using a sample of mothers. Fewer than 5 percent of mothers were found with March amounts greater than April amounts in 1987, compared with 33 percent in 1985, perhaps indicating that the edit was not made in 1985. (March amounts can be higher than April amounts after the edit because March child support was reported together with alimony and other miscellaneous payments and contributions, which are received by few families.)<sup>3</sup> Based on the evidence, CBO excluded the change from 1985 to 1987 in its extrapolation.

Second, for the last in the string of child support outcomes--the amount of child support payments for those who receive less than the full amount due--no projection was made.<sup>4</sup> Ignoring the change from 1985 to 1987, for the reason just discussed, left only two observed changes. Those percentage changes were erratic among marital statuses, with several very large increases and one moderate decrease. For that reason, CBO did not project that variable. Its value did increase indirectly in the simulation of 1995--by an average of \$28 or 2 percent for all such mothers--because of projected increases in award amounts and in other child support outcomes. Nonetheless, by not directly projecting increases in that variable, which rose an average of 5 percent every two years for all such mothers, CBO underestimated its true increase for the one-third of mothers who had a child support payment but received a partial amount.

Some of the improvement in child support outcomes during the last part of the 1980s may have been caused by the adoption of presumptive guidelines and immediate wage withholding by some states before they were required under federal law. In order not to count the effects of those legislative changes twice, any such estimated effects in 1989 on child support outcomes were removed from the trends. CBO's adjustment for guidelines reduced by 4 percentage points the percentage increase in award amounts in 1989, which ranged from zero to almost 11 percent

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3. For a more detailed discussion of this problem, see Daniel R. Meyer, "Data Adjustments in the Child Support Supplement of the Current Population Survey" (Institute for Research on Poverty, Discussion Paper No. 976-92, Madison, Wisconsin, 1992).

4. The TRIM2 model does not simulate the average amount of child support received directly. It is simulated indirectly through the probability of receiving the full amount due, the award amount for those receiving the full amount due, and the amount of child support received for those who receive less than the full amount due.

depending on marital status; no adjustment was made for wage withholding because its estimated effect was minuscule.

The resulting projected trends are shown in Table B-2. TRIM2 took these projections as its targets in the 1995 simulations and hit them reasonably well. When changes were fairly sizable, the error was usually within 10 percent. When the projected changes were very small--for example, from wage withholding--the percentage error could be very large, but the effects on the 1995 outcomes were nonetheless quite small.

### ADJUSTING FOR LEGISLATIVE CHANGES

The specific legislative changes enacted in the Family Support Act of 1988 and the Omnibus Budget Reconciliation Act of 1993 that CBO projected to 1995 are requirements to improve the establishment of paternity, mandatory use of guidelines in the setting of child support awards, periodic review and modification of past awards, and the withholding of child support from wages immediately upon issuance or modification of the award. Except for paternity establishment, CBO based its projections on various published studies of the legislations' effects.

Table B-3 summarizes the estimated impacts of the four legislative changes on child support outcomes between 1989 and 1995. For all legislation except paternity establishment, overall impacts were estimated as the product of two variables: the proportion of mothers who are affected and the effect on child support outcomes for the average mother affected by the legislation. Those estimates were not made independently by marital status.

In estimating the first variable--the proportion of mothers who are affected--three general factors were usually applicable. First, only a subset of all mothers eligible for child support are potentially affected. The legislative provisions sometimes apply only to mothers in the IV-D system--a proportion estimated to be 55 percent--rather than to all mothers eligible for child support. In addition, the provisions on guidelines and immediate wage withholding apply only to those mothers with new and modified awards during the 1989-1995 period and review and modification applies only to those mothers with awards more than three years old. The number of potentially affected mothers also depends on the date each provision was placed in effect. As the number of these potentially affected mothers grows over time, the legislative impacts will continue to increase beyond 1995.

**TABLE B-2. PROJECTIONS OF CHANGES IN CHILD SUPPORT BASED ON TREND ADJUSTMENTS, 1989 TO 1995**

Marital Status	Eligible Women <sup>a</sup> (In thousands)	Women Who Have Awards as a Percentage of Those Who Are Eligible <sup>b</sup>	Average Award Amounts <sup>c</sup> (In nominal dollars)	Women Who Receive Child Support as a Percentage of Those Who Have Awards	Women Who Receive Full Amount Due as a Percentage of Those Who Receive Some Payment	Average Child Support Received If Less Than Full Amount Due <sup>c</sup> (In nominal dollars)
Divorced	5.8	-1.2	23.6	2.4	0.9	e
Separated	-9.0	4.2	-14.4	-0.6	4.5	e
Married <sup>d</sup>	11.5	5.7	-6.5	3.9	5.7	e
Never Married	45.4	7.5	27.5	7.8	-9.6	e

**SOURCE:** Congressional Budget Office.

**NOTES:** Projections were based on extrapolations of the two-year growth rates in the number of eligible women and child support outcomes as measured in the April Child Support Supplements of the Current Population Surveys for 1982, 1984, 1986, 1988, and 1990. Those surveys are available every other year.

Projections were developed for each marital status. Thus, a projection for all women was not made, and the resulting changes for all women reflect the changes for each marital status.

- a. Eligible women are those with children under 21 years old who are eligible for child support payments from a noncustodial father. Estimates of the number of eligible women are for 1990 and 1996, the years following data on their child support outcomes.
- b. Mothers who have awards of child support are only those eligible to receive child support payments in 1989 or 1995.
- c. Average amounts are per mother.
- d. Married women are those currently married who have a child from a previous marriage or a birth out of wedlock.
- e. This variable was not projected separately, as discussed in the text.

**TABLE B-3. PROJECTIONS OF CHANGES IN CHILD SUPPORT BASED ON LEGISLATIVE CHANGES, 1989 TO 1995**

<b>Legislative Change</b>	<b>Women Who Have Awards as a Percentage of Those Who Are Eligible<sup>a</sup></b>	<b>Average Award Amounts</b>	<b>Women Who Receive Child Support as a Percentage of Those Who Have Awards</b>	<b>Women Who Receive Full Amount Due as a Percentage of Those Who Receive Some Payment</b>	<b>Average Child Support Received If Less Than Full Amount Due (In nominal dollars)</b>
<b>Paternity Establishment</b>	All never-married mothers get 6 percentage-point increase	n.a.	n.a.	n.a.	n.a.
<b>Guidelines</b>	n.a.	All mothers with new awards get 15 percent increase <sup>b</sup>	n.a.	n.a.	n.a.
	n.a.	38 percent of other mothers with awards get 15 percent increase	n.a.	n.a.	n.a.
<b>Review and Modification</b>	n.a.	4 percent of mothers with awards get 60 percent increase	n.a.	n.a.	n.a.
<b>Immediate Wage Withholding<sup>c</sup></b>	n.a.	n.a.	11 percent of mothers with awards get 8 percentage-point increase	7 percent of mothers with awards get 5 percentage-point increase	7 percent of mothers with awards get 10 percent increase

(continued)



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**TABLE B-3. CONTINUED**

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**SOURCE:** Congressional Budget Office.

**NOTES:** Percentage changes in award and payment amounts are in nominal dollars.

n.a. = not applicable.

- a. Mothers who have awards of child support are only those eligible to receive child support payments in 1989 or 1995.
  - b. Mothers with new awards assigned in TRIM2 are those from the trend adjustment increasing the number of mothers who have awards and from the effect of paternity establishment.
  - c. Because immediate wage withholding applies to mothers with new or modified awards, those mothers affected by withholding were assumed to be a subset of those affected by guidelines or review and modification.
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The second factor is an adjustment for the fact that the 1989 base data may already reflect those legislative changes for some mothers. CBO reduced the estimated impacts of legislative changes to exclude those mothers from any additional effects. Their number depends on the extent to which states had carried out the enacted provisions before the law required it.

The third factor indicates how much mothers, after the first two adjustments, are actually affected. For example, of those mothers eligible for review and modification, how many actually have their awards modified? The answer depends on the legislative requirements, how they are being applied by the states, and the characteristics of the custodial and noncustodial parents and of the child support program in each jurisdiction. Those three factors were estimated from a variety of sources for each of the legislative changes.

The second variable--the effect each legislative change has on child support outcomes for the average mother affected by the change--was estimated from published studies. As discussed below, however, the impact of increased establishment of paternity was estimated using a different method.

### Paternity Establishment

It is more difficult to estimate the effects of legislative changes in paternity establishment than it is to assess the effects of the other legislation because there are no studies that examine the full range of legislative changes. Rising numbers of paternity establishments in the IV-D system, however, provide another window from which to view the earlier legislation's effects, although it is too soon to see any impact from OBRA-93 reflected in the numbers.

Paternities established in the IV-D program have grown rapidly, from 230,000 in 1985 to just over 550,000 in 1993. Establishments have increased by an average of 12 percent a year since 1986, but the increases have been erratic. Growth accelerated in 1990 and 1991, but declined sharply thereafter, probably reflecting both a dropoff in the growth of AFDC cases as the 1990-1991 recession ended and the decision by the Office of Child Support Enforcement to refrain from enforcing the performance standards. During the 1990-1993 period, when most of the Family Support Act changes were taking effect, IV-D establishments increased by more than 13 percent a year, compared with average annual increases of less than 10 percent during the 1986-1988 period. That accelerated growth of about 3 percentage points is one crude measure of the effects of the Family Support Act changes, and the one

CBO used.<sup>5</sup> To that measure, CBO added an additional effect for in-hospital establishment of paternity.

That 3 percentage point effect, attributed to the Family Support Act's changes in paternity establishment, represents 25 percent of the total growth in IV-D paternity establishments projected during the 1990-1995 period, or approximately 285,000 establishments. That number was reduced by 10 percent to allow for some of them to be for children in the same family. Some 80 percent of the establishments were estimated to result in awards, leaving an estimated increase of 205,000 never-married mothers in the IV-D system who acquire awards in the 1989-1995 period. In addition, CBO estimated that in-hospital paternity establishments add 55,000 never-married mothers with awards outside of the IV-D system, based on the Denver demonstration (see Chapter 3).

The total addition of never-married mothers who will have awards of child support in 1995 is then 260,000. Adding these never-married mothers to those who already have awards in 1995 yields a new probability of 27 percent, compared with a probability of 21 percent before these mothers are added. That increase of 6 percentage points is CBO's estimate of the effect of legislation to establish paternity.

### Guidelines

Guidelines affect all mothers with new awards, not just those in the IV-D system. (Mothers with modified awards are also affected but they are treated under review and modification.) Of mothers who have awards, the proportion who secure new ones between 1989 and 1995 was estimated to be 55 percent. The ratio is based on data from the CPS-CSS on the proportion of mothers with awards whose first award was secured during the last six years. By some reports, about 14 states were using presumptive guidelines as of January 1988, before they were mandated by the Family Support Act.<sup>6</sup> Based in part on that statistic, CBO estimated that 20 percent of mothers who had awards in 1989 had ones that already reflected the effect of guidelines. The estimated impact of guidelines on the average mother affected--the second variable--was already reduced because guidelines were not applied to all

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5. One possible reason for the erratic growth in IV-D paternity establishments is that the number of out-of-wedlock births changed. If births jump sharply, for example, paternity establishments should also rise rapidly. The ratio of IV-D paternity establishments to out-of-wedlock births, however, also increased more rapidly in 1990 and 1991, compared with the years before and after. That shift supports the possibility that the larger increase during those years reflected the legislative changes.
  6. Policy Studies Inc., "Literature Review and Analysis of Issues: Child Support Enforcement Amendments of 1984" (Denver, Colorado, 1988) and Advisory Panel on Child Support Guidelines and Robert G. Williams, "Development of Guidelines for Child Support Orders: Advisory Panel Recommendations and Final Report" (National Center for State Courts, Williamsburg, Virginia, 1987).

eligible mothers; thus, CBO made no further adjustment to the first variable. In other words, the third general factor discussed earlier was one. The resulting CBO estimate was that 45 percent of mothers who have awards will be affected by guidelines in 1995--that is, all mothers assigned new awards in the TRIM2 simulation and 38 percent of other mothers estimated to have new awards.<sup>7</sup>

The estimated effect of guidelines was based on findings for the states of Colorado, Hawaii, and Vermont, where the weighted average effect was just under 18 percent, and on the effect in Arizona of 12 percent to 15 percent (see Chapter 3 for more detail).<sup>8</sup> Thus, CBO used an estimated effect of 15 percent.

### Review and Modification

By 1995, all IV-D mothers who have had their awards for more than three years will be eligible for a modification of their awards. The proportion of mothers for whom the most recent award is older than three years was estimated to be 60 percent.<sup>9</sup> Because there are reports that some states have been slow in carrying out reviews, CBO assumed that only 75 percent of those mothers will actually have their awards reviewed. The evidence seems to indicate that few voluntary modifications were taking place in 1989, and any effect of modifications in 1989 was thus assumed to be zero. Finally, CBO estimated that 15 percent of mothers eligible for review actually have their awards modified (see Chapter 3). As a result, only 4 percent of mothers with awards were estimated to be affected by review and modification in 1995.<sup>10</sup>

CBO's estimate of a 60 percent increase in award amounts as a result of review and modification was based on the demonstration results for Colorado, Delaware, and Oregon. As reported in Chapter 3, the average effect for Colorado and Delaware was 64 percent and for Oregon 59 percent.

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7. The estimate was derived as  $.55 \times (1 - .2) = .45$ . Because of the uncertainty associated with those--and the following--estimates, they were usually rounded. The mothers assigned new awards in TRIM2 were those with paternity established and awards secured as a result of recent legislation and those with new awards (supposed to receive child support) from the trend adjustment.
  8. Illinois was not included because of the effect of employment changes on the estimate, as noted earlier.
  9. Estimate from Anne R. Gordon, "Income Withholding, Medical Support, and Services to Non-AFDC Cases After the Child Support Enforcement Amendments of 1984" (Mathematica Policy Research, Inc., Princeton, New Jersey and Policy Studies, Inc., Denver, Colorado, 1991).
  10. The estimate was derived as  $.55 \times .6 \times .75 \times .15 = .04$ , where .55 equals the proportion of mothers who are in the IV-D program.

### Immediate Wage Withholding

Immediate wage withholding potentially affects mothers in the IV-D system who have secured new awards or had them modified since late 1990, as well as other mothers whose awards were issued in 1994 and 1995. CBO estimated that the first group makes up about 35 percent of 1995 child support mothers who have awards and the second group makes up about 10 percent, representing a total of 45 percent. Some states were using immediate wage withholding for IV-D cases in 1989 before it was mandated by the Family Support Act and others were using delinquency withholding. About 25 percent of IV-D cases were estimated to already be subject to income withholding in 1989, but none of the non-IV-D cases were. Thus, on average, 20 percent of the mothers were already affected. Finally, CBO estimated that two-thirds of the mothers remaining after the first two adjustments actually have immediate income withholding imposed. As discussed in Chapter 3, data from Wisconsin through 1989 showed that immediate withholding was ordered at the time the award was established in about 83 percent of the cases. The 30-office study found, however, actual use in jurisdictions with immediate withholding to be only 59 percent for IV-D cases with new orders. Thus, about 25 percent of mothers with awards in 1995 were estimated to be affected by immediate wage withholding.<sup>11</sup>

By contrast with the first two legislative changes, which affect only one child support outcome directly, wage withholding affects three outcomes: the probability of receiving any child support, the probability of receiving the full amount due, and the amount of child support received by mothers who receive less than the full amount. CBO divided the affected 25 percent of mothers into the three groups as follows: 11 percent who move from receiving no child support to receiving some; 7 percent who move from receiving partial payments to receiving the full amount due; and 7 percent who continue to receive a partial but higher payment.

The effects of immediate wage withholding that CBO used in its projections are an 8 percentage point increase in the probability of receiving any child support, a 5 percentage point increase in the probability of receiving the full amount of child support due, and a 10 percent increase in the amount of child support received if the amount is less than the full amount due. The first two findings were taken from the Daniel Meyer and Judi Bartfeld study (see Chapter 3).<sup>12</sup> None of the studies that CBO reviewed presented any findings for the third child support outcome. CBO assumed a 10 percent effect, based roughly on the estimated effects of immediate

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11. The estimate was derived as  $.45 \times (1 - .2) \times .67 = .25$ .

12. The finding of Daniel Meyer and Judi Bartfeld that the probability of receiving the full amount due would increase by 4 percentage points was increased to 5 percentage points because CBO was raising the probability for a different--and smaller--group of mothers.

wage withholding on child support compliance rates reported in several studies (see Appendix C).<sup>13</sup>

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13. The compliance rate is the ratio of child support paid to child support due. Because wage withholding should not affect the amount due, the percentage change in the numerator--child support paid--equals the percentage change in the compliance rate.

## **APPENDIX C**

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### **STUDIES OF THE EFFECTS OF IMMEDIATE WAGE WITHHOLDING**

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A number of studies have focused on the ways in which immediate wage withholding affects child support collections. Although the Congressional Budget Office (CBO) used findings from one of the studies, as reported earlier, findings from the other studies are presented for comparative purposes. The study that CBO employed--the most recent one using data from Wisconsin--measured the dependent variables in the most useful way for purposes of this study, and it was thought to be the most reliable.

These studies measured the effects of immediate wage withholding in two ways (see Appendix Table C-1). Where information on the use of immediate withholding was available for individual child support cases, its effects could be measured directly. Where such information was not available, cases were assumed to have, or not have, immediate withholding depending on whether the people involved lived in counties or states where immediate withholding may or may not have been carried out. The first approach--at least if the Wisconsin data are used--is preferable. Studies based on county or state use should, all else being equal, underestimate the effects of immediate withholding because many cases in the counties or states that enforce immediate withholding will not have withholding orders. Other counties or states will use immediate withholding in some cases.

CBO used the Wisconsin study by Daniel Meyer and Judi Bartfeld to measure the effects of immediate withholding; it was discussed earlier. Its findings showed a decline over time in the effect of having an immediate withholding order in place at the time of the award. CBO used the results for the third year after the award was issued.

Two other studies, by Marieka Klawitter and Irwin Garfinkel, also use data from Wisconsin. The most recent of their studies found that immediate withholding had little effect on child support payments after correcting for the increased likelihood that cases assigned immediate income withholding involved noncustodial parents with more stable or higher-paying jobs, and thus higher child support payments than other noncustodial parents.<sup>1</sup> Before that correction, the study found that child support payments increased by 12 percent for non-AFDC families and by 35 percent for AFDC families as a result of immediate income withholding. An

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1. By contrast, Daniel Meyer and Judi Bartfeld found the opposite when testing for the same bias, namely that the effects of immediate withholding were higher after adjustment, implying that the immediate withholding cases might be the "worst," rather than the "best," cases.

TABLE C-1. ESTIMATES OF THE EFFECTS OF IMMEDIATE WAGE WITHHOLDING ON CHILD SUPPORT

Study (Area Examined)	Dependent Variable				
	Compliance Rates <sup>a</sup>	Child Support Payments	Probability of Receiving a Child Support Payment	Probability of Receiving Full Payment	Months Paid/ Months Due
<b>Studies That Identify Withholding for Individual Child Support Cases</b>					
Meyer & Bartfeld (Wisconsin) <sup>b</sup>	Year 1: 11 pts. (20 percent) Year 2: 6 pts. (11 percent) Year 3: 5 pts. (9 percent)	n.a.	Year 1: 12 pts. (15 percent) Year 2: 8 pts. (11 percent) Year 3: 8 pts. (11 percent)	Year 1: 4 pts. (18 percent) Year 2: 4 pts. (14 percent) Year 3: 4 pts. (14 percent*)	Year 1: 14 pts. (26 percent) Year 2: 8 pts. (15 percent) Year 3: 6 pts. (11 percent)
Klawitter & Garfinkel (Wisconsin)	n.a.	AFDC: 35 percent <sup>c</sup> Non-AFDC: 12 percent <sup>c</sup>	n.a.	n.a.	n.a.
Garfinkel & Klawitter (Wisconsin)	28 percent	n.a.	n.a.	n.a.	30 percent
<b>Studies That Identify Withholding by County or State</b>					
Garfinkel & Klawitter (Wisconsin) <sup>d</sup>	11 percent*	n.a.	n.a.	n.a.	14 percent
Garfinkel & Robins <sup>e</sup> (United States)	5 pts. (16 percent)	24 percent	n.a.	n.a.	n.a.
Gordon (Four States)	5 pts. (8 percent*)	n.a.	n.a.	n.a.	4 pts. (8 percent*)

SOURCE: Congressional Budget Office.

NOTES: Pts. = percentage points; n.a. = not applicable.

All variables are statistically significant at or above a 5 percent level unless designated with an asterisk.

Effects are shown in terms of both percentage points and percentage changes, when available.

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TABLE C-1. CONTINUED

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- a. The compliance rate is the ratio of child support paid to child support due.
- b. The authors measured the effects of having an immediate withholding order in place at the time of the first award on the various dependent variables in the first, second, and third years after the award.
- c. Although these coefficients are statistically significant, after adjusting for the possibility that cases with immediate withholding are those with higher, more stable incomes, the coefficients decline and are no longer significant.
- d. This is the same study as above but the dependent variables are measured differently--namely, by whether the family resided in a county with immediate wage withholding or resided in another county.
- e. Results are based on the March-April Child Support Supplements of the Current Population Surveys, 1979-1988, using a pooled cross-section sample. In this sample, only around five states had immediate wage withholding and only for one or two of the years. Those effects were based on averaging coefficients from four alternative regressions and calculating percentage changes based on sample means.

Citations:

Daniel R. Meyer and Judi Bartfeld, "The Effects of the Immediate Withholding of Child Support on Collections Over Time" (Institute for Research on Poverty, Final Report for Wisconsin Department of Health and Social Services, 1992).

Marieka M. Klawitter and Irwin Garfinkel, "Child Support, Routine Income Withholding, and Postdivorce Income for Divorced Mothers and Their Children" (Institute for Research on Poverty, Discussion Paper No. 938-91, Madison, Wisconsin, 1991).

Irwin Garfinkel and Marieka M. Klawitter, "The Effect of Routine Income Withholding of Child Support Collections," *Journal of Policy Analysis and Management*, vol. 9, no. 2 (1990), pp. 155-177.

Irwin Garfinkel and Philip K. Robins, "The Relationship between Child Support Enforcement Tools and Child Support Outcomes" (Institute for Research on Poverty, Discussion Paper No. 1004-93, Madison, Wisconsin, 1993).

Anne R. Gordon, "Income Withholding, Medical Support, and Services to Non-AFDC Cases After the Child Support Enforcement Amendments of 1984" (Mathematica Policy Research, Inc., Princeton, New Jersey, and Policy Studies Inc., Denver, Colorado, 1991).

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earlier study by the same authors found that immediate income withholding had a statistically significant effect on two child support variables--compliance rates and the ratio of months paid to months due--increasing them by 28 percent and 30 percent, respectively.

**APPENDIX D****DATA SUPPORTING THE ANALYSIS**

Table D-1 shows the data underlying Figures 1 and 4 through 8. They are from the matched March Current Population Survey-April Child Support Supplement of the Bureau of the Census for the various years.

TABLE D-1. CHILD SUPPORT OUTCOMES, BY MARITAL STATUS, 1981-1989

Year	All	Divorced	Separated	Married	Never Married
<b>Number of Eligible Women<sup>a</sup> (In thousands)</b>					
1982	8,387	2,861	1,552	2,201	1,708
1984	8,690	3,204	1,451	2,129	1,854
1986	8,808	3,045	1,363	2,322	2,009
1988	9,415	2,958	1,381	2,386	2,625
1990	9,955	3,056	1,352	2,531	2,950
<b>Women Who Have Awards as a Percentage of Those Who Are Eligible<sup>b</sup></b>					
1981	48.2	71.1	33.4	59.0	10.4
1983	46.0	65.3	29.9	57.6	11.8
1985	49.7	71.6	33.2	61.0	15.1
1987	51.3	70.6	45.5	69.4	16.4
1989	49.8	69.5	39.0	66.6	19.8
<b>Average Award Amounts<sup>c</sup> (In 1993 dollars)</b>					
1981	3,938	3,869	5,003	3,923	1,724
1983	3,659	3,835	4,167	3,518	1,794
1985	3,352	3,757	3,543	2,974	1,902
1987	3,606	3,854	3,571	3,520	2,571
1989	3,524	3,914	3,442	3,455	2,357
<b>Women Who Receive Child Support as a Percentage of Those Who Have Awards</b>					
1981	71.8	73.8	79.9	66.7	62.9
1983	76.0	76.4	87.1	71.9	75.8
1985	74.0	75.1	84.3	68.5	76.2
1987	76.1	78.0	74.0	72.9	83.3
1989	75.2	77.0	79.7	72.1	73.2
<b>Women Who Receive Full Amount Due as a Percentage of Those Who Receive Some Payment</b>					
1981	65.1	64.9	64.5	63.6	79.5
1983	66.4	68.2	69.3	63.0	65.1
1985	65.1	67.8	63.4	62.4	61.9
1987	67.3	69.8	65.2	69.8	56.4
1989	68.3	66.0	70.5	71.4	66.5
<b>Average Child Support Received<sup>c</sup> (In 1993 dollars)</b>					
1981	3,375	3,558	3,804	3,059	1,627
1983	3,398	3,615	3,893	3,141	1,643
1985	2,977	3,411	2,798	2,642	1,542
1987	3,168	3,534	3,118	3,055	2,029
1989	3,119	3,396	3,036	3,164	2,019

(continued)

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TABLE D-1. CONTINUED

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SOURCE: Congressional Budget Office calculations based on the Child Support Supplements of the Current Population Survey.

- a. Eligible women are those with children under 21 years old who are eligible for child support payments from a noncustodial father. Data for the 1981-1987 period are for women 18 years old and older; data for 1989 are for women 15 years old and older.
  - b. Mothers who have awards of child support are only those eligible to receive payments.
  - c. Data for 1987 and 1989 are before adjustment of payment amounts by the Bureau of the Census. The 1987 and 1989 amounts may not be consistent with amounts in the preceding years.
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